



Hemospray hemostasis in bleeding diffusely ulcerated esophagus

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Background and Aims: Bleeding from diffuse esophageal ulcerations can be difficult to treat. Hemospray is a hemostatic powder, and its mechanism of hemostasis is thought to be through concentrating clotting factors and forming mechanical plugs on bleeding vessels.

Methods: The authors present 3 consecutive cases of diffusely ulcerated esophagus with clinically significant bleeding. The first 2 cases failed conventional hemostatic treatment including clipping and injection therapy. In the third case, Hemospray was used as the first-line monotherapy.

Results: Immediate hemostasis was achieved in all 3 patients, and they did not develop recurrent bleeding for more than 2 months.

Conclusions: The authors propose that Hemospray application should be considered as the first-line therapy in diffuse esophageal ulcerations with clinically significant bleeding, potentially reducing the need to repeat endoscopy. Once the Hemospray achieves hemostasis, it provides a cyto-protective barrier on the diffusely ulcerated mucosa against ongoing acid reflux, allowing the new tissue to grow more efficiently during the ulcer healing period. (VideoGIE 2019;4:142-4.)

Hemospray TC325 (Cook Medical, Winston-Salem, NC, USA) is a hemostatic powder, and its mechanism of hemostasis is thought to be the concentration of clotting factors and the formation of mechanical plugs on bleeding vessels.¹⁻⁴ Currently, Hemospray is approved for nonvariceal bleeding and can be used as either a primary hemostatic monotherapy or a salvage modality. The reported primary hemostasis rate is between 85% and 95% with a recurrent bleeding rate of 15% to 25%.¹ A recently published decision analysis suggests that a Hemospray-based first approach is most cost effective for bleeding lesions at low risk for delayed hemorrhage.⁵ The authors present 3 consecutive cases of diffuse esophageal ulcerations with clinically significant bleeding that were successfully managed by Hemospray after it became available. In the first 2 cases, conventional hemostatic treatment, including clipping and injection therapy, was not successful. In the third case, Hemospray was used as first-line monotherapy.

PATIENT 1

A 55-year-old patient was transferred to our medical center for continuing significant GI bleeding after endoscopic clipping of bleeding ulcerations at the gastroesophageal junction. Urgent endoscopy showed that 2 endoclips were in place, and active oozing of blood was seen around the clips. Endoscopic injection of epinephrine failed to

stop the bleeding. Immediate hemostasis was achieved with Hemospray application.

PATIENT 2

A 69-year-old patient presented with significant upper-GI bleeding that needed several units of blood transfusion. During urgent endoscopy, active bleeding was seen from diffuse esophageal ulcerations in the distal esophagus. The bleeding persisted with endoclip application but was stopped with Hemospray therapy.

PATIENT 3

A 20-year-old patient experienced hemodynamic instability from upper-GI bleeding. Urgent endoscopy demonstrated diffuse esophageal ulcerations with adherent clots and active bleeding (Figs. 1 and 2; Video 1, available online at www.VideoGIE.org). Hemospray was applied as first-line monotherapy, and hemostasis was achieved immediately (Figs. 3 to 6). All patients demonstrated continuing clinically significant bleeding despite intravenous proton pump inhibitor therapy. Immediate hemostasis was achieved in all 3 patients, and they did not experience recurrent bleeding for more than 2 months.

The authors propose that in patients with diffuse esophageal ulcerations with clinically significantly bleeding,

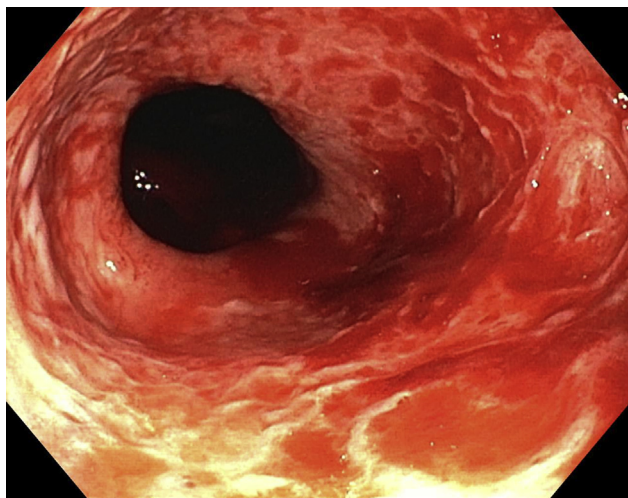


Figure 1. Endoscopic image of diffusely bleeding ulcerated esophagus.

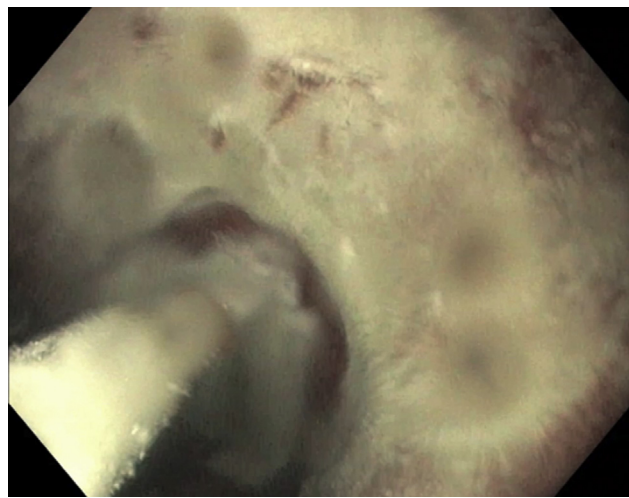


Figure 4. With repeated Hemospray application, hemostasis achieved.

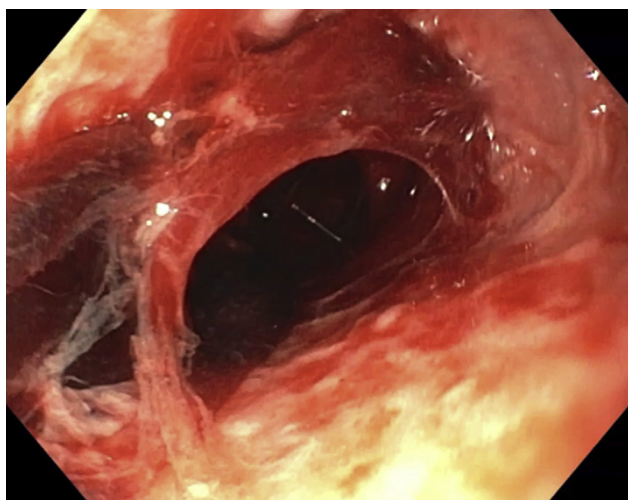


Figure 2. Diffusely bleeding ulcerated esophagus with adherent clots.

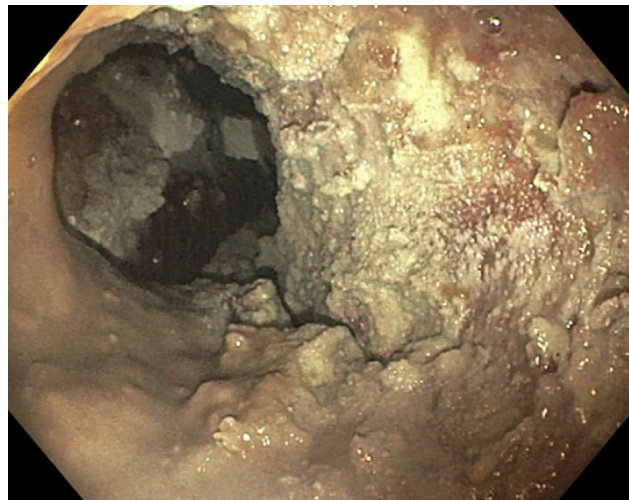


Figure 5. Complete hemostasis achieved.

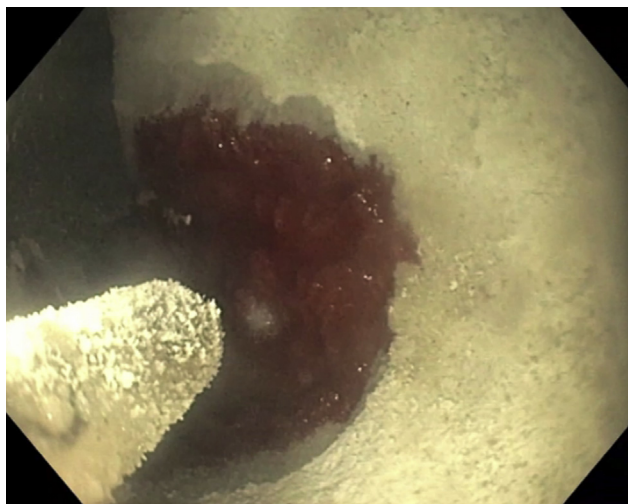


Figure 3. After initial Hemospray application, there is continued bleeding in the 3 o'clock position.



Figure 6. Complete hemostasis achieved.

Hemospray should be considered as first-line monotherapy to achieve hemostasis, potentially reducing the need for repeated endoscopy. The rationale includes the following: (1) Conventional hemostatic therapy such as thermal coagulation; clipping is difficult to apply in the setting of diffusely bleeding esophageal ulcerations and is associated with a small risk of treatment-related perforation. (2) No large vessel is generally encountered in diffuse esophageal ulcerations. Once the Hemospray achieves hemostasis, it provides a cytoprotective barrier to the diffusely ulcerated mucosa against acid reflux, allowing the new tissue to grow more efficiently during ulcer healing.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

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